

selected from the group consisting of 2,2'-azobis-[N,N'-dimethyleneisobutyramidine]  
dihydrochloride and derivatives of 2,2'-azobis-[N,N'-dimethyleneisobutyramidine]  
dihydrochloride, and a diagnostic, therapeutic, or prophylactic agent into an animal's body; and  
applying thermal energy transdermally for a sufficient amount of time to polymerize or  
crosslink the said prepolymer, or allowing the pre-polymer to polymerize or crosslink using only  
the animal's own body heat as a thermal energy source.

Please add the following new claims:

- 50. (New) The method of claim 17 wherein the polymerizable material is biodegradable before and after polymerization.
51. (New) The method of claim 17 wherein the polymerizable material has unsaturated functional groups.
52. (New) The method of claim 17 wherein the polymerizable material has functional groups selected from the group consisting of acroyl, methacroyl, allyl, and vinyl.
53. (New) The method of claim 17 wherein the polymerizable material is a hydrogel.
54. (New) The method of claim 17 wherein the polymerizable material and thermal initiator are covalently linked together.

55. (New) The method of claim 17 wherein the step of introducing comprises introducing the material and initiator under the skin, into a muscle, into a body cavity, into a potential space, or into an organ.

56. (New) The method of claim 17 wherein the thermal polymerization initiator initiates polymerization between 37°C and 45°C.

57. (New) The method of claim 17 wherein the thermal polymerization initiator is water soluble.

58. (New) The method of claim 17 wherein the thermal polymerization initiator has limited toxicity in animals.

59. (New) The method of claim 17 wherein the step of introducing comprises injecting said prepolymer and said initiator using a syringe.

60. (New) The method of claim 17 wherein the step of introducing comprises placing said prepolymer and said initiator during a surgical procedure.

61. (New) The method of claim 17 wherein the step of applying thermal energy comprises applying thermal energy from a heat source selected from the group consisting of a heating pad, a water bath, a hot water bottle, a heat lamp, and a light.--